

NEW TERRA · FERTILIZERS WITH GOLDCOTE™

As sure  
as the sun  
will rise

 **Terra**

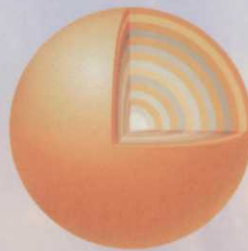


## Predictable, Controlled Release

Predictability – that’s exactly what you want and need from a controlled-release fertilizer. And that’s exactly what Terra’s GoldCote™ polymer technology delivers.

Terra’s GoldCote nutrients are released based on soil temperature. As turf root activity and nutrient requirements increase with soil temperature – the release of nutrients from Terra’s new fertilizers with GoldCote also increases. Your turf has what it needs – when it needs it.

Plus, since temperature is the key, the GoldCote release rate is virtually constant for all levels of soil moisture, soil pH and microbial activity.



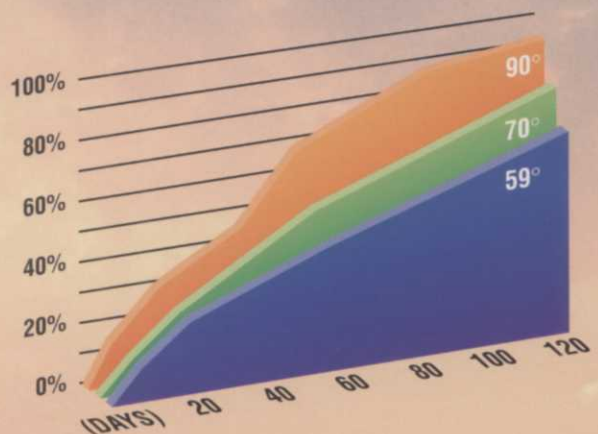
### **Here’s how GoldCote works.**

*As the soil temperature increases, water vapor from the soil passes through the multiple coatings. The resulting condensation and pressure within the fertilizer granule causes a precise and predictable release of nutrients.*

In fact, as this chart shows, nutrient release from Terra fertilizers with GoldCote can be accurately predicted based on temperature. That means you’ll get the performance you expect – when you expect it. You can count on it.

### **GoldCote Release Rates**

% Released/Days/Soil Temperature



## Consistent, Superior Nutrition

You know exactly what you want and what your course needs. From urea to monoammonium phosphate (MAP) to potassium nitrate, there's a Terra controlled-release fertilizer with GoldCote that will meet your demands.

And if you demand the best, Terra's potassium nitrate fertilizer with GoldCote is what you want. It provides a balance of potassium and nitrate nitrogen for good blade and root growth. Terra's potassium nitrate fertilizer with GoldCote:

- improves turf quality and color;
- promotes steady, consistent growth;
- eliminates growth spurts and fluctuations;
- minimizes waste and potential pollution caused by leaching and volatilization, and
- reduces the salinity and potential burn common with the use of many fertilizers.

One thing is as certain as you seeing the sun rise each morning – all Terra GoldCote fertilizers have been formulated with the highest quality nutrients and developed to deliver the results you want.

## Fewer Applications

You know better than anyone that there's never enough time – or manpower – to do everything that you need to do. Terra GoldCote reduces the amount of application time your people have to spend compared to conventional fertilizers. Plus, consistent nutrition means consistent growth. There are no growth spurts. No fluctuations. And, as a result, no extra mowings. You can use your people where you really need them.



*Talk to Terra about the entire line of fertilizers with GoldCote. You'll get predictable release and superior results with fewer applications.*

*You can count on it.*

**GoldCote**<sup>TM</sup>  
FROM TERRA



## There's a Terra fertilizer that's right for your course.

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*Working with you.*

**E**lk Ridge, a new golf course in Gaylord, Mich., is run by Superintendent Jon Maddern, who also got to build the course from the ground up.

The course was carved out of pine forests, and the trees provided a substantial stockpile of recycled material for future use.

After the course was established, and the original maintenance building was filled with equipment, Jon began to mill the trees that had been collected a few years previous. After milling the lumber and drying it for a year, Maddern used it

to build another maintenance/storage site.

At Franklin Hills, many of the trees have been hit by lightning over the past few years, and being involved with the USGA and the Audubon, we decided to leave the trees standing until we could figure out what to do with them. The trees were large maples, ash and oaks.

The Club decided to do a clubhouse renovation. The wood that had been milled for the shelters is now going to be used for

oak doors, panels and furniture.

The company we hired cut the trees into 100-inch lengths. We had 8-foot planks as a finished product. The trees were cut at four quarters and eight quarters, for a finished board of one inch and two inches.

After cutting all the trees into planks, we "sticked" them, by putting a one-inch square piece of wood between the planks. The sticks are placed every four feet, so the wood dries without warping. It takes nine to 14 months to dry, and should be left in the open air so that it can dry evenly. If the wood is covered and air movement is restricted, the pile will mold and mildew.

Wood that is too small for planks is split into firewood for members.

In Detroit, oak costs \$8-\$10 per board-foot.

## Mill fallen trees for new projects on the course



TOM GRAY, CGCS  
Guest Columnist

### [GOLF]

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Plan for equipment replacement

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Hartefeld's Kelch improves course

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Superior designed for maintenance

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ASGCA a global association

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'High' course keeps mowers in 'low' gear

By milling the wood, the cost is reduced to 30 cents per board-foot plus drying time.

By offering a place for other tree trimmers to dispose of their logs, and by milling dead or dying trees around the course, we plan to some day build a rain shelter or a second maintenance building.

*Tom Gray is Superintendent at Franklin Hills CC, Franklin, Mich.*

### [SUPERS ON COURSE]

**Scott Mendenhall** has taken the lead at North Ranch Country Club, Westlake Village, Calif. Scott was in Ventura County building Spanish Hills CC, and has finished construction of Rancho San Marcos in Santa Barbara County.

**Kevin Neal** is new superintendent at Seacliff Country Club in Southern California.

**Tom List** is superintendent when the Newport Bay Golf Course reopens in Berlin, Md. this Spring. Previously called the Bayside Course, Newport Bay has been redesigned and reconstructed by Lester George of Colonial Golf Design, Inc., Richmond, Va. Construction was by Quality Grassing, Lithia, Fla.

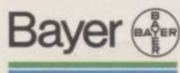
Ocean City Golf & Yacht Club is a 36-hole private club open to the public for resort daily fee play. Eleven holes are bordered by salt marshes and waters of Newport Bay.



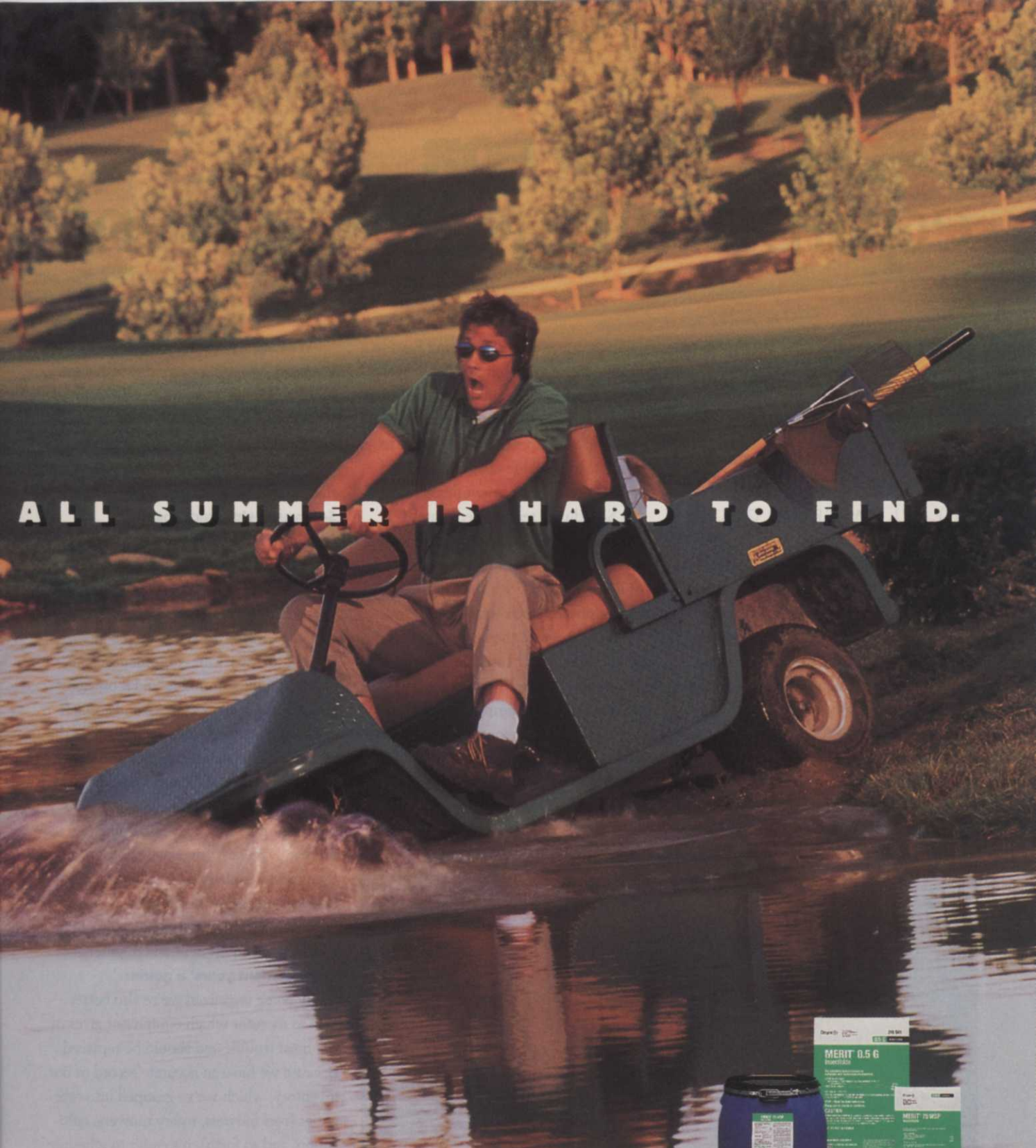
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# PLAN AHEAD FOR equipment replacement

*Don't wait until the budgeting process starts to inform your facility's decision makers about your equipment needs.*

By PAUL BASTRON, CGCS

**Y**our equipment replacement program starts and ends with your budget. How can you make sure there's enough there to acquire the type of equipment you need to provide the playing conditions that your customers demand? You can't, but you can increase your chances by keeping your facility's decision makers informed about what you need.

This requires a plan. It doesn't have to be elaborate or formal. It just has to work for your situation. The procedure that we use at Glen Flora Country Club includes:

- ▶ Proper equipment maintenance to prolong the useful life of equipment and increase future replacement flexibility.
- ▶ Scheduling replacement dates.
- ▶ Justifying and selling our program and the need for equipment to our members.

I'll briefly outline what we do.

#### **Old equipment lasts, when cared for**

We all recognize the need for reliable new equipment, but I still like to keep a few "antiques" restored and in good working operation. For example, our old Ryan utility cart probably wouldn't last a week if everybody on our crew used it. But it makes a perfect divot cart for Leo who treats it like his own.

We have a Ford tractor that's about 40 years old. We use it every day to cut the range and other areas around the course.

It's good for the members to see some old equipment being taken care of along with the new equipment. And, believe me, this older equipment gets noticed!

#### **Software helps track costs**

We've found that tracking our equipment costs is a huge asset at replacement time. We use an inexpensive computer program ("What Vehicle History?" from Organic Computer Wizardry, Paonia, CO; 970/527-6756). Our equipment technician Bob Collier found it, and it only cost about \$100. It tracks service and costs. It tracks each service event and organizes the information by vehicle, service and date.

It keeps track of labor hours, parts used and comments, and there's an inventory system to track stock levels if you chose to do that. Software can usually do a lot more than most people need. You'll probably have to customize the program to fit your needs. Computers give technicians a better way to track equipment and maintenance.

#### **'Replacement years' a guide**

By being organized we're also better able to monitor which equipment gives us the most trouble and should be replaced. Because we have an accurate record of our inventory, which we've grouped into categories (reel mowers, rotary mowers, cultivation, and so forth), it's easier to schedule projected replacement dates. I simply prepare a list of the equipment according to the replacement year.

We try to present this information in as clear a fashion as possible. This makes it easier for our committee and other key people, particularly the finance director, to understand our needs.



Paul Bastron's fondness for good machinery is evident in this immaculate Harley Davidson which he often rides to and from Glen Flora Country Club just north of Chicago.



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The 18-hole Glen Flora Country Club course usually gets about 18,000 rounds a season. It's maintained by a combination of vintage and newer equipment and tractors.

These lists work best when they're readily available. We don't want to wait until budget time to inform our decision makers of our equipment needs.

#### **Tell board all you can**

We set up a meeting in the spring or summer to show our board members what we have in the way of equipment, and what it's used for. At the same time we point out equipment that should be replaced, or any problems we're having with a particular piece of equipment.

This is a good time to point out details such as quality of cut, down time and hydraulic leaks. They're usually very interested in this. We give them a copy of our equipment lists for the next two or three years. When they see \$150,000 or \$200,000 worth of equipment listed out, they get a better idea of how vital it is to keep it up on an annual basis.

Even if you've done everything you can to document and publicize your equipment replacement needs, it's no guarantee

## Dealer speaks up for maintenance

Mark Downey of G&T Equipment Co., Kansas City, Mo., sees first hand the problems that arise when end-users don't follow preventive maintenance schedules. Downey is a John Deere dealer.

"Normal greasing intervals, oil change intervals and air cleaner intervals are not observed," says Downey, "and we're going to see this as more of a problem. With the advent of two-year warranties, we're going to see warranty issues in that second year derive from poor maintenance.

"[Dealers] may be caught in the middle, with the customer thinking it should be covered by warranty, and John Deere saying it's not."

Downey therefore takes an active role in equipment training.

"As a salesman, if that equipment does not perform because it is not maintained properly, I miss a sale next time. So that's why I always conduct training sessions. I've been doing it for three, four years."

Equipment companies will clamp down on equipment abuse if the leasing concept is to ever succeed, says Downey.

"They're going to ask for engines back and inspect them."

The bottom line is...the bottom line.

Equipment is an expensive proposition, all they way around.

"The lack of maintenance is driving the cost (of equipment) up, because a lot of that cost in this market is derived by the extensive warranty," says Downey.

"Dealers aren't the ones who are charging that, it's the manufacturer who is charging for warranty. John Deere has to amortize enough in the price to cover the warranty expense over the two-year period. And that's got to be a large portion of Deere's market price. I have no idea how John Deere amortizes that, but they have to. It's like medical insurance," Downey explains.

"The more people who go to the doctor, the higher insurance costs get. When they start going for things that aren't really necessary, it's no different from when you fail to grease a mower. We, as a dealer, want to keep you happy and warranty it. John Deere has to take a look at that at the end of the year, and say, 'we have to add another 'X' percent to the cost to the dealer because the warranties are really costing us.' It's a cause and effect type of thing. And the dealer is caught in the middle. Thousands of dollars are written off by us through our shop because of unpaid warranties." Terry McIver

your requests will be approved. The final decision is often made at a closed-door budget committee meeting. That's another reason why it's important to keep all the decision makers at your facility—particularly the finance director—informed of your needs. We give Budget Committee members a brief description of the proposed equipment and costs. Because of our previous efforts they should have enough information to make a decision.

We realize that it's not likely we'll get everything in the way of equipment we would like so we've learned to stretch the life of equipment. One way to do this is to use aging equipment in less critical areas.

#### **Equipment 'shifts' rotate machinery**

For example, we don't buy new mowers for tees or collars. We buy the new ones for greens, and shift the older units to tees and collars. Our mowers used for green banks are shifted to intermediate roughs after four to six years. Triplex mowers are shifted from greens to approaches, range and nursery after about four years.

Educating your decision makers will increase their awareness of the importance of keeping up with your equipment needs.

—The author is superintendent at Glen Flora Country Club, Winthrop Harbor, IL.

The Club has about 210 golfing members and the 18-hole course gets about 18,000 rounds a season.

# QUELANT™-Ca

## Calcium & Amino Acids

# CALCIUM DEFICIENCY CORRECTOR

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# Hartefeld boss adjusts turf height, saves water

## Nutrition \$\$ a high priority

Kelch believes there is only one way to grow grass, and that is to fertilize. "For the first year I didn't put down enough. It seems that when you do a grow-in, I honestly don't think you can put down enough fertilizer. You need to grow the grass and grow it quickly so you can cover your ground. If I had to do it all over again, I'd put down a lot more fertilizer than I did at the beginning if I could possibly do it."

In the event of heavy rains, which can cause washouts, a dynamic fertilization plans helps reduce the potential for erosion damage if the grass can quickly grow.

Washouts caused ruts more than two feet deep, and the need for what was very nearly like a second grow in.

Kelch had about \$30,000 for fertilizer in 1997.

"I'm fertilizing probably 40 acres of rough, 4 acres of tees and greens and 27 acres of fairways. The rough takes a lot.

"I treat that the same as the rest of the golf course."

JC

By JOHN B. CALSIN, JR.

**I**n three years a design team, construction company and grounds crew have transformed once rolling farm land into a top daily fee course, Hartefeld National, Avondale, Pa.

The 7000-yard course designed by Tom Fazio, is the new home for the Bell Atlantic Senior PGA Tour event.

Bill Kelch, CGCS, says the site "was just corn fields and dirt" when he arrived. Yet, only about 300,000 cubic yards of dirt were moved for the entire course.

Kelch thinks the experience of seeing a new course evolve and grow in is "pretty unbelievable."



Kelch shows the filter fabric liner at hole 17 that has become exposed due to raking. It's tough to keep the grass wet and growing over the liner, says Kelch. The liners will be removed before the Bell Atlantic tourney.

## Water schedules moderate

"We do a lot of hand-syringing here," says Kelch. "It's hands and hoses. It's time consuming. It's hard. But it's the way it should be done. If the grass doesn't need water, it shouldn't have water."

When conditions warrant irrigation, however, Kelch says to put the water down deep. But he stresses it is "infrequent."

They try to go at least 10 to 14 days and longer, if possible, between watering. About 50 minutes worth of water, about an inch, is put down.

Number 10 was a problem hole. Before the construction of houses that have begun to ring the course and particularly this

hole, there were a lot of trees. There was little air circulation because the hole is in a hollow.

During the grow-in and after, there were such problems with the green they had to put in fans there. Kelch tells the story that one day he paid a visit to the green and found course owner Davis Sezna playing the hole.

"Do you smell that?" asked Kelch.

"Yes," said Sezna.

"That's not the compost pile across the street," said Kelch. "This green is rotting."

"Go buy those fans now," said Sezna.

Fans were brought in, and for the first year, the green was babied.



The fans at number 10 green circulate air and reduce chance for disease. Trees were reduced by 20 percent around this green. Fans by Paterson Fan Co., Blythewood, SC.

"We cut it every other day," says Kelch. "We applied fungicides to it a little bit more, fertilized it a little bit more, and it came back. Now that the trees are cleared out, and we have the fans running between midnight and six or seven in the morning, it keeps the air circulating, and it is cooler down there."

#### Mowing height lowered slowly

"We found the best way to grow in the fairways was to let it grow up high," says Kelch. We actually push-mowed our fairways for a little over a month. Then we got the little 72-inch National out there, and we started at  $\frac{3}{8}$ ". We lowered that down, and finally went into the triplex at  $\frac{1}{2}$ ".

Greens are grown with Southshore and Crenshaw. Fairways and tees are ryegrass and roughs are bluegrass.

The herbicide/fungicide budget is "probably close to other high-end daily fee courses, but I try to stretch it out," says



The bunkers and gnarly fescue rough on number 5 make for a tough approach.

## Grounds crew gets the credit

Bill Kelch never stops thanking his grounds crew for the work they do.

"They're the guys that have really made this course shine," claims Kelch. "I oversee what they do, but they do all the grunt work. The grounds crew is really the unsung hero of making this golf course aesthetically pleasing to golfers."

Kelch has a crew of 17, three of whom are managers. Six are employed year-round.

His assistant is Steve Edkin. John Long is second assistant, and the mechanic is Jim D'Orazio, who has his hands full of expensive, quality machinery.

"Right now I have 15 Cushmans; 2 five-plex mowers; 3 triplexes; three 26-inch T-mowers; 8 greens mowers; six trailers; core aerifiers and a host of other little machinery. That is the main concern for me, to get the golf course cut," says Kelch.

"I still like to get my hands dirty," says Kelch. "I don't like to sit behind a desk. I do have a second assistant, but if you're going to be a manager, you got to be a manager. If you're going to be a superintendent, you have to be a superintendent."

Kelch talks about the importance of getting out and seeing what's going on.

"You have to get out and walk the course, take a look at it. Take early morning walks around, look for disease. And I still syringe the greens."

JC

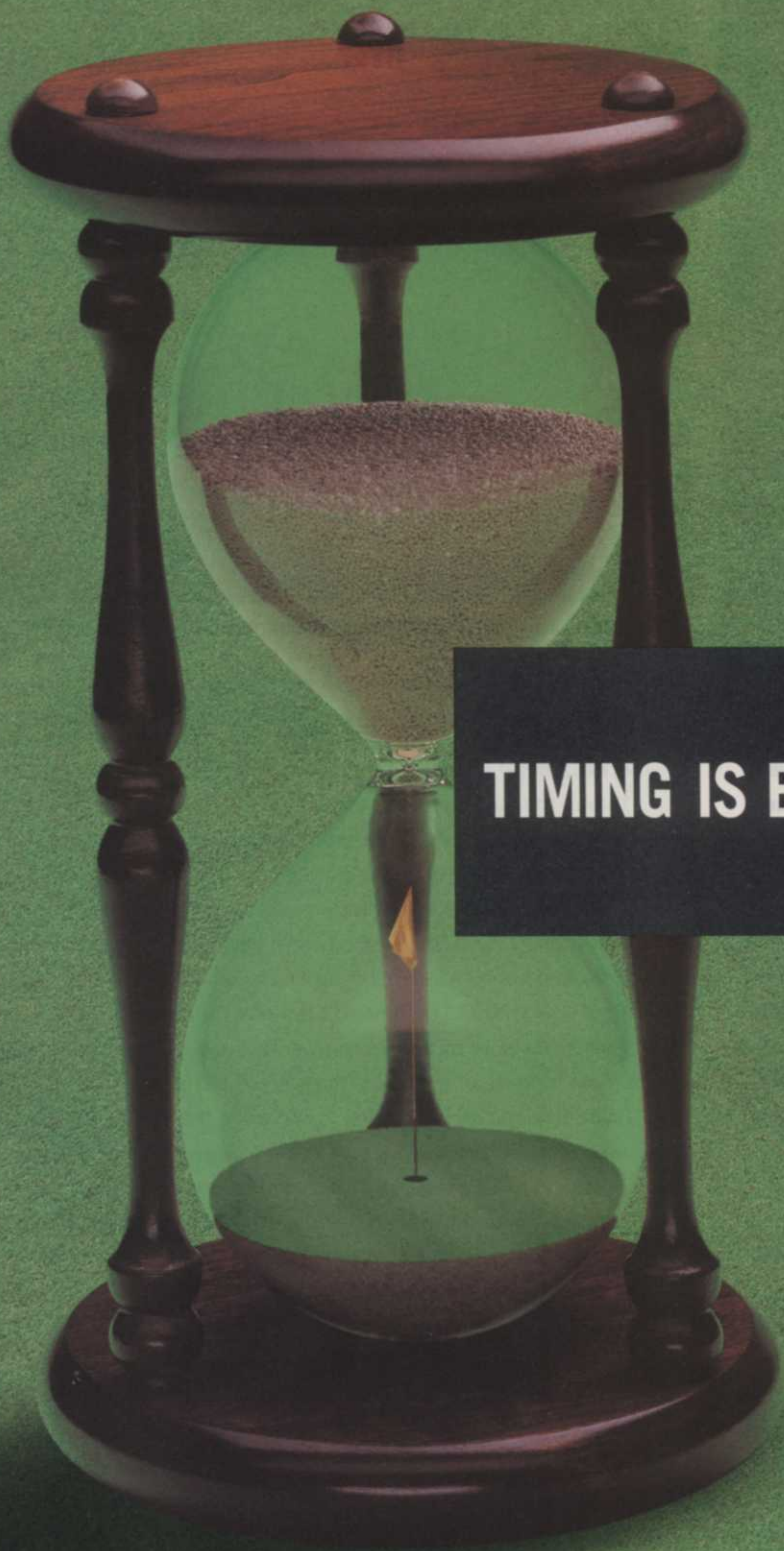
Kelch, who plans in two-week cycles which helps the owners balance the funds.

By "playing the weather," Kelch says he needed one application against *Pythium* in 1997, which probably saved him \$15,000.

Hartefeld has sand-based greens that are an 85/15 sand/peat mix.

"It's 12-inches of sand and four inches of pea gravel, and there is herringbone drainage all through every green, so these greens drain well," says Kelch.

*Photos by John B. Calsin, Jr.*



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# Designed for maintenance



On the 17th hole, golfers tee off of a 135-foot bluff overlooking swift Poplar River.

*Mike Davis joined the Superior National management team from the outset. He got the opportunity to contribute suggestions that make the course easier to maintain.*

By BRIDGET FALBO

Along the rocky north shore of Lake Superior in Minnesota's north woods, lies a 400-plus acre golf course carved out of a forest of second-growth aspen, birch and spruce. The course is split by the Poplar River, a fine trout stream. Nearby Superior National Forest lends its name to the golf course—Superior National at Lutsen.

Course architect, Don Herfort of Minneapolis, designed this course—located 90 miles north of Duluth, Minn.—to preserve the area's wilderness beauty. Superintendent Mike Davies has maintained it since its opening in 1991 with equal devotion.

This is a special location with views of expansive Lake Superior from 13 of the 18 holes. (Newcomers to the course soon learn that all putts break to the lake.) Aspen and birch frame the fairways, isolating each hole. On the course's signature hole, golfers tee off of a 135 foot bluff overlooking the rushing Poplar River.

Davis joined the course management

team at the beginning. He got the opportunity to contribute suggestions that make the course easier to maintain. He can say, literally, that he knows this course from the ground up. Or, maybe that's "from the rock up," since the course sits atop glacial till with lots of exposed rock.

"I wouldn't say this is the greatest site to build a golf course; you need a little bit of soil to build a course," says Davis grinning.

He worked closely with the U.S. Soil and Water Conservation to save what little topsoil the site contained; building silt screens and earth dams to trap the sediment before it washed away into the river; constructing sediment ponds to catch runoff. The ponds are now part of the lagoons on the course.

#### **Shallow soil, slow drain**

Because of the shallow three to four inches of topsoil, the course can only absorb so much water. Hilly terrain exacerbates the problem. The course, in fact, backs up to Moose Mountain which drains down across the course. Davies has installed drainage tile across some fairways,

built earth berms to hold water off others, and dug drainage ditches.

He also leaves the turf at a higher cut near the ponds to filter out chemicals as the water drains, and also leaves a no-spray zone around water features to prevent chemical runoff. On the hole featuring the Poplar River flowing through the fairway, Davies' crew planted a rose hedge along the upper banks of the river just off the tee. The roses are heavy feeders soaking up extra water and fertilizer, and look great.

The course was built on private land that was donated to Cook County. It's owned by the county and managed by a board of local resort owners.

"Surrounded by the Poplar River, Lake Superior and the Boundary Waters [the Boundary Waters Canoe Area Wilderness], I have to be very environmentally conscious," explains Davies who takes a curative rather than preventive approach to disease control. In 1995 and 1996, for example, Davies kept the turf healthy without using any summer fungicides. He

*cont. on page 20G*



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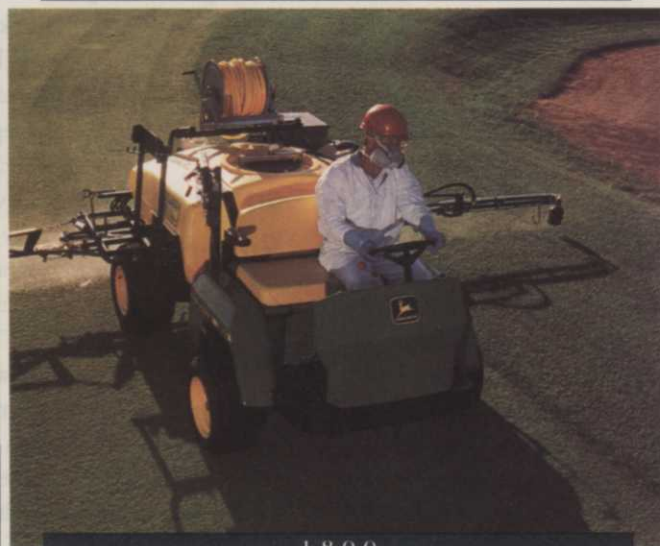
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admits he couldn't have done this if golfers and management didn't agree to allow some disease to be tolerated.

**The best defense: hardy turf**

For his part, Davies is pretty aggressive with top dressing, verticutting and aerating. "The harder your turf, the less prone it will be to disease," says Davies. He recently overseeded the fairways with new and improved varieties that are hardier than previously grown. He used Abbey Victa and Coventry varieties from Scotts.

Fertilizing with organic fertilizers, such as Milorganite, helps maintain the health of the turf, without creating nutrient buildup in the surrounding ecosystem. Davies applies fertilizer so it will be absorbed before a heavy rain and when the plants will use it most efficiently. He uses biostimulants, like liquefied seaweed extract, to increase the microbial activity which, he believes, also helps prevent disease. He's also experimented with shots of micronutrient products mixed with a wetting agent.

If the wilderness setting isn't challenge enough, Davies knows how wet and cold northern Minnesota can get. Davies' crew spends many spring days snowblowing greens. They hand shovel

**The Poplar River crosses the fairways on the 2nd and 4th holes.**

**Superintendent Mike Davies deals with natural nuisances in all sizes, from large moose and bears to the minute dollar spot, on his course in northern Minnesota.**

when they get close to turfgrass, sometimes after the course is open the second weekend in May, when sportsmen fill local resorts for the start of sport fishing.

Generally Lake Superior keeps the weather wetter and cooler than more inland areas. A fog may roll in off the lake and stay for three days. Occasionally the course is plagued by pink snow mold in the fall because of the increased wetness. Increasing the drainage and cutting the grass

*Three inches of ice sat on some of the Superior greens throughout winter.*

to keep the dew off helps dry the grass faster to keep this disease in check, but Davies occasionally resorts to spot spraying with Daconil 2787.

The worst weather-related damage Davies has yet encountered revealed itself this past spring as a result of a late-fall ice storm that killed the turfgrass on many of his greens.

"Three inches of ice sat on some of the greens through the winter. If it had been

three degrees cooler we would have gotten two feet of snow instead of the freezing rain and the greens would have been fine," Davies says. Nine greens needed restoration; several requiring complete renovations.

"When confronted with a situation like this from Mother Nature you learn to prioritize," Davies says. The damaged greens were aerated early, verticut heavily and overseeded two and three times. Davies purchased some 6-mil poly green covers to boost soil temperatures and encourage faster growth. The last green finally came in on the fourth of July weekend.

**Go lightly for turf care**

Davies believes in using the lightest equipment possible and walk-mowing the greens to avoid stress on the grass. His Airway unit proved invaluable this year due to the heavy use in renovating the greens. This unit doesn't core the area, but rather penetrates the green with a shatter tine and gets the air and water exchange to the roots without disrupting the surface.

Having a great mechanic is essential to successfully maintaining a course, says Davies. He adds that his maintenance man keeps the equipment in top form and always sharpened, so grass is cut cleanly rather than broken. Employees walk mow all the greens, rather than using the triplex mower—at least until early fall, when he loses five or six of his staff of eleven as they return to college and high school. □





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- Bruce Burchfield  
Fox Run Golf Club  
St. Louis, Missouri



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- Wayne Mills  
Valencia Country Club  
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WEEK 1



WEEK 2



WEEK 3



WEEK 7



WEEK 8



WEEK 9

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golf courses around the country. Now, more and more superintendents are discovering that Daconil Ultrex fungicide, with its exclusive Super

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WEEK 4



WEEK 5



WEEK 6



WEEK 10



WEEK 11



WEEK 12

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after a 1/2" rain stress (SEM - 500X)<sup>††</sup>



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User must have label in possession when applying these rates.

†For a copy of our Daconil Ultrex Super Weather Stik Guarantee, write to Daconil Ultrex Guarantee, ISK Biosciences Corporation, Turf & Specialty Products, 1523 Johnson Ferry Rd., Suite 250, Marietta, Georgia 30062

†† Micrographs have been colorized for demonstration purposes.



# ASGCA goes global

*Golf course architects now practice their art in hundreds of countries.*

By PAUL FULLMER, ASGCA

**D**uring the '60s, television was bringing golf into the homes of millions and one golf course architect—Robert Trent Jones—was making headlines around the country with his dramatic new courses.

The growth of the American Society of Golf Course Architects in the past 35 years mirrors the interest in and progress of the profession of golf course architecture:

Larry Packard became active in the Society in the late '60s. He recognized the need for a permanent organization, and for a



Foundation that would address subjects that effect the development of golf courses. In 1970 I became the first Executive Secretary of the Society and set up operations in Chicago.

#### Youngsters energize

Early on most members of the Society were senior practitioners, but gradually members brought in their sons, associates or recognized competitors, and this "young blood" (Bobby and Rees Jones, Ed Seay, Bob Graves and Bill Amick) helped transform the Society. In 1977 President Seay invited the heads of other golf associations to the ASGCA annual meeting, which was the nucleus for the formation of the Allied Associations of Golf.

#### Landfills to landscapes

The Society took an early interest in golf's environmental side, with Phil Wogan, a graduate biologist and long-time ASGCA member, developing a White Paper on the subject in 1972. This led to additional Professional Development sessions and a variety of articles on how environmentally sensitive sites, such as landfills and abandoned mines, could be reclaimed as productive and visually-appealing golf

ASGCA pioneers meet for the 50th Anniversary in Toronto. Larry Packard (second row, right), established the headquarters office during his presidency in 1970-71. Geoff Cornish, (fifth row, right), also a Fellow and former president, received the Donald Ross Award from the Society in 1982.

courses. Some 100 golf courses have been designed and built on "impossible" sites.

Bill Love, chairman of the Environmental Affairs Committee, authored the industry's first in-depth environmental analysis in 1992, *An Environmental Approach to Golf Course Development*. Along with former ASGCA presidents Don Knott and Mike Hurdzan, Love was a major player within the Allied Associations of Golf in the 1996 development of the *Environmental Principles for Golf Courses in the United States*.


Today, the American Society of Golf Course Architects has 130 members.

—Paul Fullmer has been executive secretary of the American Society of Golf Course Architects since 1970. He graciously wrote this article for LM's Anniversary Issue. We were unable to include it in that issue due to space considerations. -ed.



ASGCA meets at the Biltmore Hotel in Clearwater Fla., 1963. New president Bill Lanford (seated) joined by (first row, from left) Jim Harrison; Red Lawrence; Floyd Farley and C.E. "Robbie" Robinson. Second row, from left, outgoing President Ralph Plummer; Robert Trent Jones; Billy Bell; Bill Neff; Perry Maxwell; Mark Mahannah. Back row, Fred Garbin and Dave Gordon. Jones was a founding member. Farley, Neff, Garbin and Gordon are still ASGCA members.






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# Elevation, climate are control challenges

*A 200-foot drop and cool, moist air from the Hudson River means equipment at Ardsley is kept in low gear, and disease activity is monitored twice a week.*

Golfers who play the Ardsley CC in suburban New York are treated to spectacular views of the cliffs of the New Jersey Palisades across the Hudson River.

"Elevation drops 190 feet from our first tee to the third and fourth holes," says Superintendent George W. Pierpoint III. "It requires a lot of hand work. We rake all bunkers by hand, and we use walking greens mowers. Getting equipment up and down the slopes is

a real challenge. We're in such a residential area that our working hours are extremely limited. Because of the noise ordinance, we can't do anything at night or before 7 a.m."

#### **Changes to bunkers, mounds**

Ardsley was built in 1895. In 1989 architect Marvin Armstrong designed a bunker and mounding renovation plan, which Pierpoint's crew follows closely. Many greens have been redesigned to modified USGA standards.

Drainage is a problem, par-



**George Pierpoint, III, right and son George IV, himself a golf course superintendent.**

ticularly on the back nine, which were built on rocky land.

"We are constantly installing drainage somewhere," says Pierpoint. "We use ADS perforated drainage with three-, four- and six-inch pipes and ADS catch basins."

Poor drainage often leads to disease problems in the lower

areas of fairways. Pythium strikes first in pockets of the 16th and 17th tees, which lie at the base of a hill. Pierpoint uses these spots as barometers for monitoring disease pressure. He uses Banal fungicide as a curative and for prevention.

The third green is sensitive to brown patch, which is not as devastating as Pythium, but nonetheless looks bad.

"It has three stages," observes Pierpoint. "You see it coming; then you treat it; and all of a sudden, it's recovered. Based on the weather, we usually spray ProStar in mid-June to early July."

#### **Nutrition for 'microclimate'**

"In general, we use a yearly rate of 4-5 lb. N/1000 sq. ft. on greens; 6 lb. N on tees; 3 lb. N on fairways and 2 lb. N on roughs, spread over several applications," says Pierpoint. **LM**



Views from high up at Ardsley can be beautiful, but the elevation is tricky for equipment maneuvers.

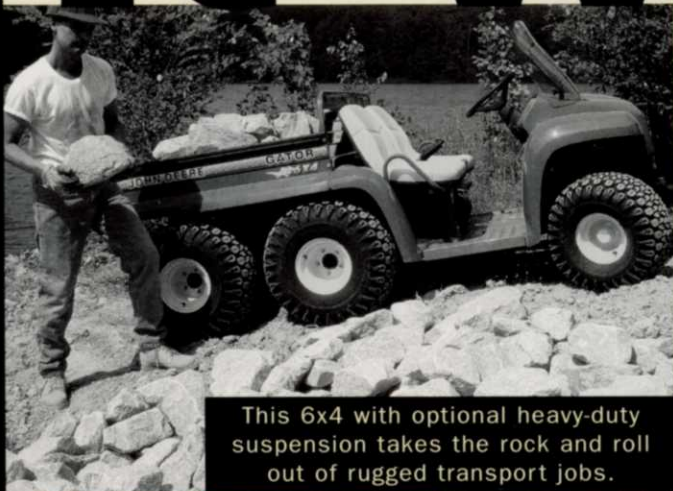
**The Concept**  
**Behind**  
**The**  
**John Deere**  
**GATOR**  
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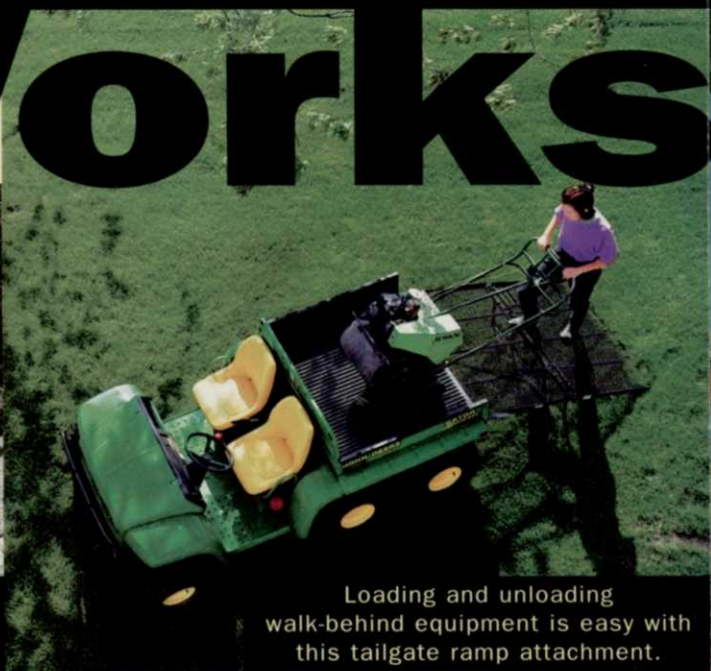
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# It Works



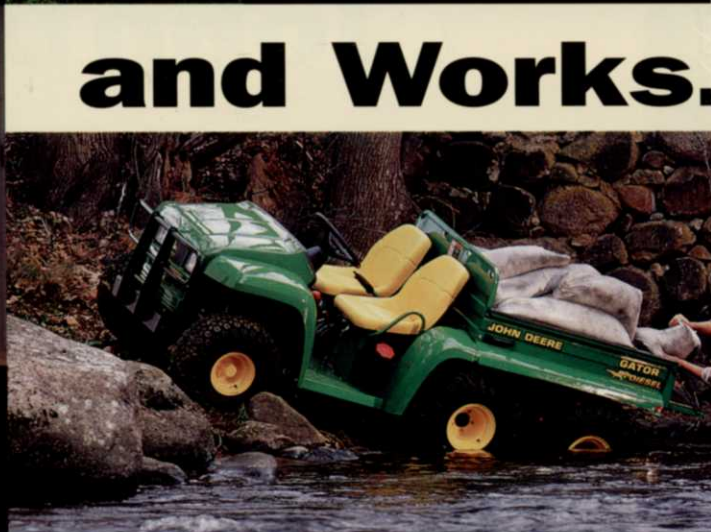
This 6x4 with optional heavy-duty suspension takes the rock and roll out of rugged transport jobs.



Loading and unloading walk-behind equipment is easy with this tailgate ramp attachment.



The LP Gas kit on the 4x2 helps take care of in-plant maintenance.



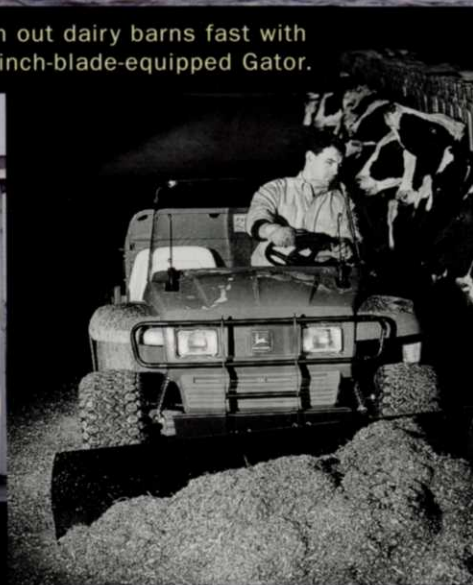
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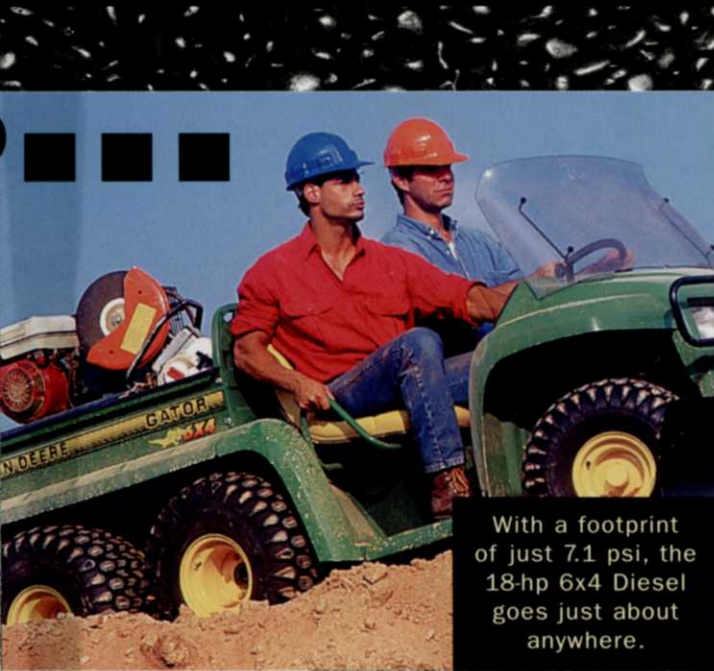


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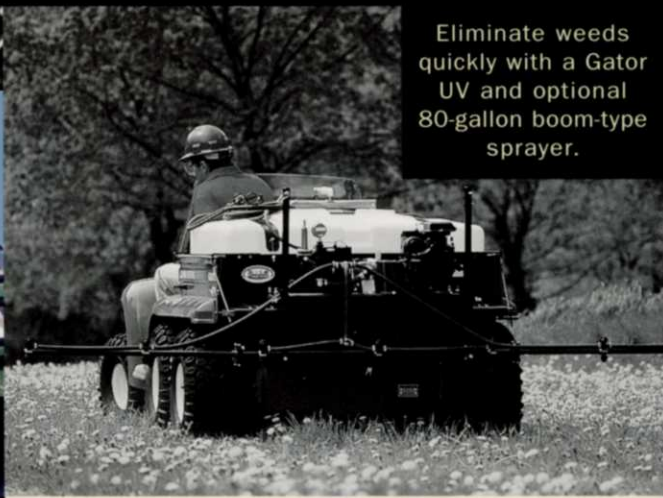


Even the 10-hp 2-wheel-drive Gator 4x2 has plenty of pulling power.



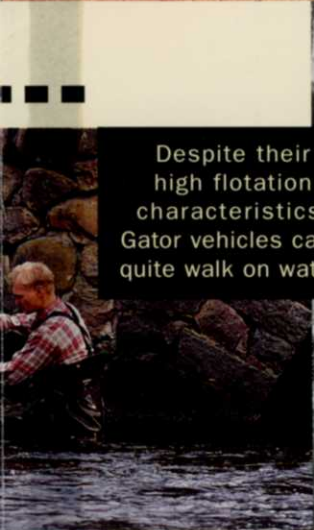


With a footprint of just 7.1 psi, the 18-hp 6x4 Diesel goes just about anywhere.



Eliminate weeds quickly with a Gator UV and optional 80-gallon boom-type sprayer.

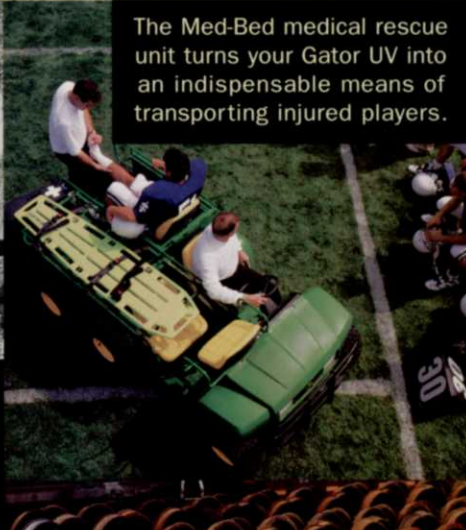
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Despite their high flotation characteristics, Gator vehicles can't quite walk on water.



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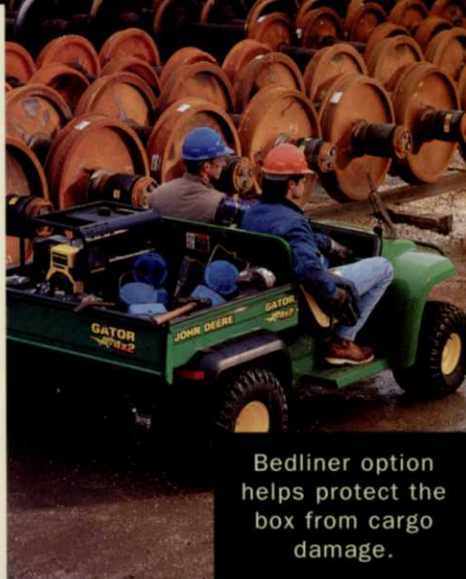
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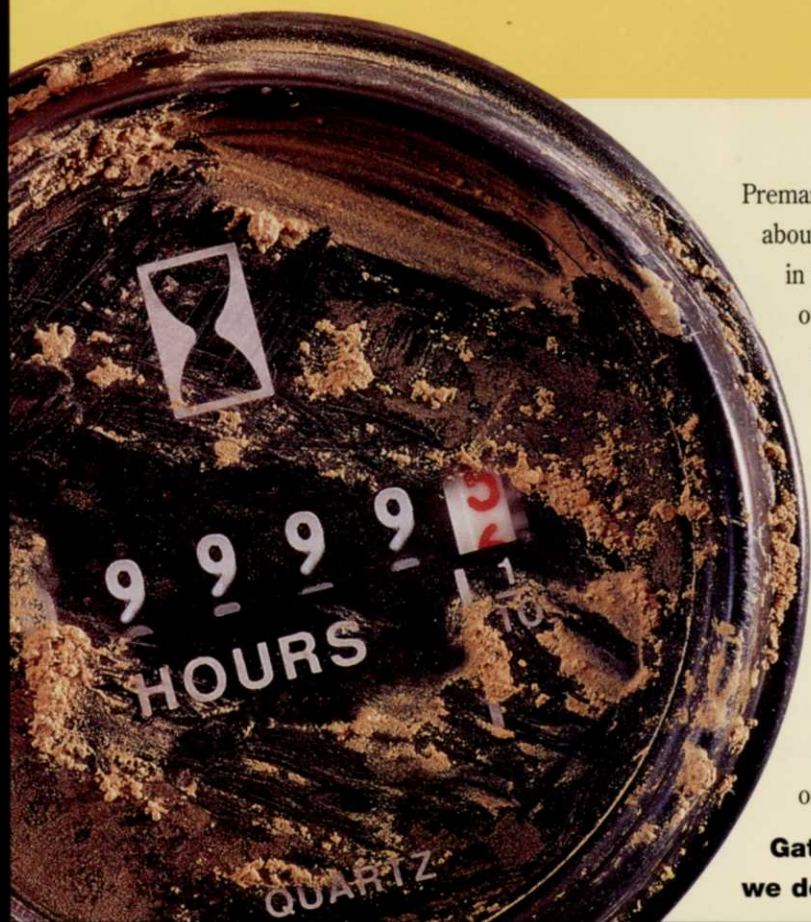
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\*Total capacity for the 6x4 Diesel — includes 200-pound operator, 200-pound passenger and maximum box capacity.

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**T**he insertion of specific genes into turfgrasses and landscape plants is in our immediate future. These genes will provide these plants with specific characteristics.

In fact, researchers at Rutgers University have genetically engineered an herbicide-resistant bentgrass. It could come to the marketplace within four or five years. Apply Roundup and the weeds die while the turfgrass remains green and healthy.

Genetic engineering will accelerate plant breeding in the green industry, and make it more precise too.

Next will come turfgrasses altered with specific genes that make these grasses resistant to diseases. To insect pests. To be either more heat or cold tolerant. To grow slower. To be more drought tolerant. We have the technology to do this now, said Virgil Meier of The Scotts Company at the recent Ohio Turfgrass Conference. But other considerations must be settled before these grasses are developed.

These include business issues.

For instance, AgrEvo holds the patent for the gene responsible for herbicide resistance in bentgrass. But there must be a mechanism to incorporate the gene into the plant. This mechanism is the gene gun and it's about the size of a bread box. It's used to *shoot*, under high pressure, tiny gold or tungsten particles coated with the desirable gene into the cells of the turfgrass plant.

The Scotts Company has exclusive rights to the gene gun for all turfgrasses, said Meier. Several other companies possess technologies also needed to develop turfgrasses in this fashion. All parties must come to a working agreement before genetically engineered turfgrasses are developed.

Then, of course, it takes several years to test the grasses for the desirable characteristics, and

[LANDSCAPE/GROUNDS]

PAGE 8 L ▶

Backyard oasis business blooms

PAGE 10 L ▶

One company, many services

PAGE 14 L ▶

Put trees, shrubs where they thrive

PAGE 16 L ▶

Expanding landscape's boundaries

## Gene science will change turf breeding



Ron Hall

RON HALL  
Managing Editor

several more to produce enough seed for commercial production.

It may be 10 years before genetically-altered turfgrasses or ornamentals start appearing in the marketplace in any numbers. But it looks like they will come.

### [PEOPLE & PROJECTS]

#### You're happy at Dennis's

The *Daily Journal of Commerce* has rated **Dennis's Seven Dees Landscaping, Inc.**, as the fifth best company to work for with 50 employees or more in Oregon and southwest Washington. Criteria included salaries, benefits, training, workplace culture, morale boosters and social responsibility. Dennis's placed as one of the LANDSCAPE MANAGEMENT "LM 100" last September.

#### Advanstar managers win

**Tom Sprague** and **Kevin Icke**, lead and assistant grounds managers for LANDSCAPE MANAGEMENT owner Advanstar Communications, won the "Golden Spade Award" from the Middleburg Heights, Ohio Chamber of Commerce. The award goes to a business that adds visual enhancement to the community. "The grounds of this business are strikingly pleasing to view, both architecturally and horticulturally," wrote reporter Judy Schumacher.

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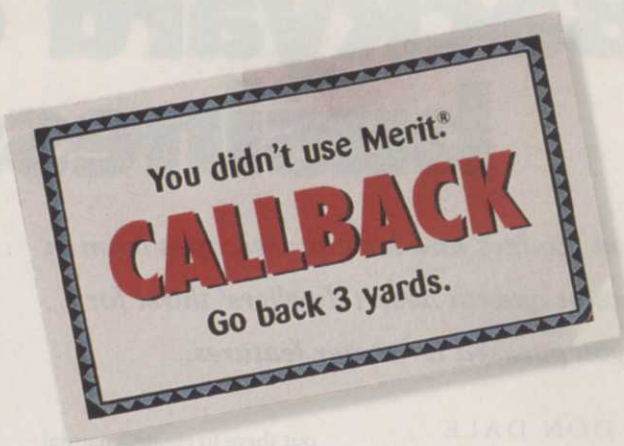
**CALLBACK**

**GRUBS!  
LOSE YOUR  
TURN.**

**YARD CARD**

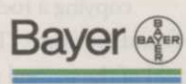
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# Backyard oasis business blooms

*Scott Hodges and his Naturescapes team in Tucson quench desert dwellers' thirst for—you guessed it—water features.*

By DON DALE

**S**cott Hodges is the president and founder of Naturescapes, Inc. of Tucson, AZ. The company produces artificial features for landscapes, and it's doing a booming business.

The nine employees of Naturescapes manufacture and install natural-looking features, and often have a five-week backlog of work. They produce components that can stand alone or can be combined into features such as ponds and waterfalls. They work mainly on residential sites.

"There's a definite desire

out there to create a natural oasis in a natural setting in a back yard," says Hodges, who focuses on Tucson but has produced features for landscapes in several southwestern states.

Naturescapes generally contracts for an entire residential landscaping job, subcontracting the plants and other aspects to other companies. Hodges and an employee do most of the designs.

"We're licensed to do landscaping, but we're too busy doing hardscaping," says Hodges, who was a masonry contractor before he got into manmade rocks. "What brought me into this was my love of creating spectacular features."

So how does he create his artificial features? It's done with special cements that are poured into hand-made molds.

The first step is to design a feature, often by copying a rock or

boulder found in nature. Then a field mold of the natural rock feature is made.

A final mold, more sturdy



Prices on standard artificial features range from \$1,600 to \$14,000.

than the field mold, is made by duplicating the field mold. Then a cast is made of the feature using a special blend of cements. That blend is proprietary and essential to creating a strong, permanent, waterproof feature that can be handled and utilized around pools and patios.

"If it's a sizeable feature we would do that on-site," Hodges says. The walls of the features are an inch thick or less, though the base of a large feature may be thicker to support weight, and special fibers are used as reinforcement. "It's an incredible psi rating."

The components are colored using an acrylic stain and assembled with other components to create larger features. They are bonded together with the same cements they are made with.

Hodges casts Schedule 40 PVC fittings right into the cement so that plumbing can be

utilized in the features. He uses PVC flex line to plumb waterfalls and fountains.

Naturescapes currently has 14 standard features on display at his Tucson office, all attractively shown also in sample books. It has over 140 different component molds that are used to cast "rocks" that will be used in those features.

The company can also go out and copy a favorite rock in nature for a customer, though prices may be high for that kind of individualized project.

Prices on his standard features are reasonable enough to appeal to the ordinary homeowner, ranging from \$1,600 to \$14,000. Most jobs are in the middle range, though the company has done some commercial jobs.

*Writer Don Dale is based in Guadalupe, Calif.*



**Scott Hodges works mostly in Tucson but has produced features for landscapes in several southwestern states.**

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# One company,



*The full-service approach worked for the DiSanto Companies when a \$4.1 billion Cleveland-based corporation built beautiful new headquarters*

By RON HALL/ Managing Editor

Offering clients "one-stop shopping" builds customer satisfaction, believes the DiSanto Companies, a Cleveland-area landscape company.

The 38-year-old firm got an opportunity to demonstrate just that this past summer as it installed the landscape at the new world headquarters of the Parker Hannifin Corporation.

The landscape company's biggest challenge? A killer deadline, made even tighter by unfavorable weather.

It's biggest opportunity? Shining on the

## many services

installation and earning a long-term maintenance contract.

The DiSanto Companies was started in 1959 by brothers George and the late Denis DiSanto. They learned a lot about landscaping from their father who had been an estate gardener. Employing about 35 people in season, The DiSanto Companies continues to maintain quite a bit of residential work, most of it in Cleveland's most affluent neighborhoods. But it's also building its commercial clientele.

Parker Hannifin is a \$4.1 billion manufacturer of motion-control components and systems used in industry and aerospace. For 62 years its home was a four-story building in Cleveland. In March 1996 it broke ground at its new location on a 32-acre site in neighboring Mayfield Heights, Ohio.

The 208,000-foot building and its surrounding landscape had to be ready by summer's end. Parker Hannifin had planned a week of open house celebrations and press

conferences to showcase its new headquarters—and, particularly, its growing stature as an international systems producer.

Local contractors, including the DiSanto Companies, pushed themselves to make sure that the headquarters were, in fact, ready.

### **Tree care, weather challenges**

Site planning, and some other important decisions, were made before the DiSanto Companies earned the landscape

## **Books on service**

*A Complaint is a Gift*, by Janelle Barlow & Claus Møller; Berrett-Koehler Publishers, 1996.

*Positively Outrageous Service*, by Scott T. Gross; Warner Books (1991).

*Service Breakthroughs: Changing the Rules of the Game*, by James L. Heskett; The Free Press (1990).

◀ **The Parker Hannifin headquarters. With a three year contract, The DiSanto Companies can commit to specialized equipment or materials for the property.**

▶ **Tim Korte: client knew benefits of functional and attractive landscaping.**



construction contract. For instance, landscape architect Knight & Stolar, Inc, and Parker Hannifin had already decided to save and relocate 36 mature trees at the site.

The property contained a nice selection of hardwoods, mostly oaks and maples. They had been planted decades ago to define fairways. The site had been a golf course before being developed into the Landerhaven Corporate Center.

"They went to extraordinary lengths to protect these trees from construction," says Tim Korte, vice president of operations of the DiSanto Companies. His company planted another 130 new trees on the site.

"The biggest challenge for us turned out to be the weather, starting with a wet spring," explains Korte. "Construction was behind because of the weather. (Workers moved 75,000 cubic yards of earth.) Then when it turned dry in the summer we had to establish what amounted to 13 acres of turfgrass at once." He chose turf-type tall fescue since some of the turfgrass areas weren't going to be irrigated.

As construction progressed through the summer, Korte felt that Parker Hannifin's appreciation of the value of a functional and attractive landscape grew.

"Even though people are driving by these commercial sites at 35 mph, we're discovering that clients are becoming more particular about every square inch of their properties," says Korte. Curb appeal (image) remains vital, but employers are finding that appropriate landscaping builds employee morale too. More and more workers at these corporate locations are using the grounds to relax during lunch, or to walk or jog.

"They're even starting to develop areas, maybe at the back of their properties, that four or five years ago they would have said, 'don't worry about it. We're not going back there,'" says Korte.

While the DiSanto Companies had earned the installation contract, that was no guarantee that it could land the maintenance contract too. DiSanto had to bid the project just like everybody else. And the company realized that it couldn't—nor did it want to be—the low bidder.

"Mature clients know what it costs to bid, and they know what services cost," says Korte. "They also know that they don't have the personnel to do the maintenance themselves."

#### **Service mix a winning edge**

Korte believes that Parker Hannifin chose the DiSanto Companies as their maintenance company, in part at least, because it could provide so many different services.

"They've asked us to be involved with everything outside, including the parking lot," says Korte. "Our company does a lot more work than the number of our employees would suggest. We concentrate most of our efforts on what we can do best, and we have excellent subcontractors who can do the rest."

He says the client benefits greatly because the installer is still on-premises, and can make any additions or improvements to the landscape as the client's budget allows.

The landscape company benefits from a three-year contract because it can commit to specialized equipment or materials for the property.

The business trend is definitely toward landscape companies that can provide many different services to the same client.

"You have to be ready to move on what each customer wants or that customer will look for someone else," says Korte. "There are a lot of companies that are willing to provide a lot of services, and we're one of them."

## **CUSTOMER SATISFACTION TIPS**

**Rick Kier, president of ProScapes, Jamesville, NY:**

▶ "Offer only those services you are prepared to perform correctly, efficiently and profitably. This may change from day to day, depending on the capacity and availability of your current resources, including management and crew time, material and equipment."

▶ "If your scheduled routes are filled to capacity, and you sell a big job without the ability to expand your resources, you are guaranteeing customer dissatisfaction."

**Howard Freilich, CEO, Blondie's Treehouse, Inc., Larchmont, NY:**

▶ "The customer is always right, because if it were not for them, we wouldn't be here. I believe longevity of service is the best measure of whether or not we are offering good customer service."

**Richard Ackerman, president, Northwest Landscape Industries, Portland, Ore.:**

▶ "A company can deliver the absolute best quality landscape, but if you don't maintain exceptional customer service, you'll probably lose the business."



**David Harris, president, Liqui-Green Lawn Care, Bloomington, Illinois.:**

▶ "It starts in the way we present and perform our service. If delivery is good, it takes away the variable that promotes dissatisfaction. It is essential to find the best employees you can with positive attitudes. Get the job done right the first time."





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# Group trees & shrubs by plant needs

*The most striking combination of plants will not succeed if their environmental needs are dissimilar.*

By LORI MAKRUSKI



Makruski: symmetrical balance for 'mirror images'.

**M**ost plants require fairly specific growing conditions such as shade or sun, wet or dry feet and acidic or alkaline soil.

Oak Leaf hydrangea (*Hydrangea quercifolia*); PJM Rhododendrons, and all varieties of Azaleas are examples of plants that will thrive together if placed in acidic soil, with a semi-shaded, protected exposure.

#### Contrasting attributes

People are attracted to certain plants because of their characteristics: color, texture, form, habit, size or attractive fruit; foliage or flowers. Interesting combinations are formed by pairing different plant characteristics. For example, an evergreen shrub such as *Juniperus chinensis* 'Hetzi Glauca' with its upright spreading form and light blue-green awl-shaped leaves and a small- to medium-sized tree with interesting bark in the foreground, such as the

Paperbark Maple (*Acer griseum*) is a stunning combination in the landscape.

#### Achieve balance

Creating harmonious proportions, whether in contrast with each other or with their surroundings, is important when selecting plant partners.

Symmetrical balance creates mirror images in the landscape and often is used in formal settings.

Asymmetrical balance combines plant material of unequal size, shape, color and texture, and is used when an informal or natural look is desired.

A grouping of the old-fashioned Saucer Magnolia (*Magnolia x soulangiana*) in the corner of a sunny, backyard border, with a mixture of spring and summer-flowering shrubs, and a tall, evergreen *Picea abies* 'Pendula' (Weeping Norway Spruce) is an example of a natural, yet balanced border.

#### Prolong seasonal interest

Most plants stand out in the landscape for a limited time during the year.

By selecting and combining trees and shrubs whose outstanding characteristics occur in different seasons, we extend the landscape's appearance year 'round. In a semi-shaded area, a striking plant combination is achieved by grouping the tall-

growing, finely-textured, evergreen Canadian Hemlock (*Tsuga canadensis*) with the spreading, dense summer-flowering shrub, Bottle Brush Buckeye (*Aesculus parviflora*). Add spring flowering deciduous trees such as the Eastern Redbud (*Cercis canadensis*) and a fall fruit-bearing shrub, for instance Chokeberry (*Aronia arbutifolia* 'Brilliantissima') for brilliant red fall foliage and persistent red fruits.

*The author manages the Landscape Management Division of Urban Environments, Inc., Columbus, Ohio.*

## TREES THAT TOLERATE WET SOILS

Species	Height	Wildlife value
<i>Acer rubrum</i> (red maple)	120'	Good summer cover for birds; mammals eat seeds, flowers, buds.
<i>Alnus</i> spp. (alder)	45-75'	Excellent cover and nest sites; goldfinches; siskins, redpolls love the seeds; persists into winter.
<i>Ilex</i> spp. (holly)	24-70'	Excellent cover; fruits are favored by many birds. flowers attract bees.
<i>Nyssa sylvatica</i> (black tupelo)	90'	Wood duck, wild turkey, robin, pileated woodpecker, mockingbird, brown thrasher, thrushes, flicker eat dark blue fruit in fall.
<i>Salix</i> spp. (willow)	35-50'	Good nest site; butterflies and bees use nectar; buds eaten by pine grosbeak, rabbits, squirrels, grouse.

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# EXPANDING landscape's boundaries in Florida

By RON HALL/ Managing Editor

**V**alley Crest is expanding the traditional view of landscape contracting. The "contracting" part gets bigger and bigger.

"Landscaping now is, maybe, 50 percent of our business," says Charles Parker, operations manager of the Valley Crest location in Orlando. "Concrete and related site work make up the balance."

Valley Crest is the nation's largest landscape and site construction company. Orlando is one of nine company locations in the United States. The central Florida operation is coming off of a \$30 million year. But everything seems to be getting bigger in central Florida in the 1990s.

Orlando, of course, is home to mega-at-



tractions like Disney World, Universal Studios, and Sea World. All are beautifully and massively landscaped. They're presence has dramatically changed the local landscape industry. Both its scope and its quality.

Valley Crest is among a handful of central Florida companies capable of delivering the "big" landscape project. This, at first view, is remarkable since Valley Crest has competed in central Florida only since about 1992. It entered that market by purchasing Oyler Construction. (Tom Oyler remains part of the overall operation with sister company U.S. Lawns.)

Parker began managing the Orlando lo-

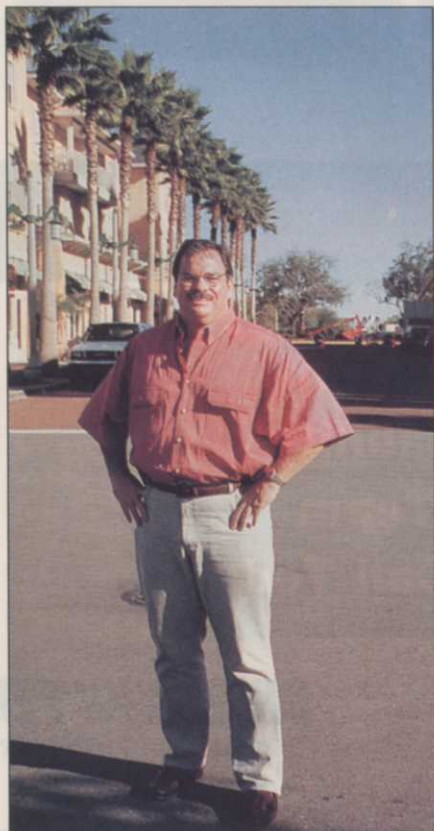
**Charles Parker, operations manager for Valley Crest in Orlando, says he sometimes feels 'like a kid in a candy store'.**

**Valley Crest has the personnel to tackle tough jobs like this themed concrete work at a hotel at Walt Disney World.**

cation about four years ago. He credits much of the Orlando site's rapid growth to the vision of Valley Crest President Richard Sperber, and the experience and support of the parent company headquartered in Calabasas, Calif.

"We have a \$300 million company backing us with a vision that is wide open," says Parker. "I sometimes feel like a kid in a candy store. Where else can we do the kind of work we're doing and have this kind of support?"

The projects that Orlando's Valley Crest location have completed in a few short years is, by any measure, impressive:



► providing the site work and landscaping, including irrigation, for the Wilderness Lodge and Coronado Springs hotels at Disney World.

► completing about \$10 million in projects in Disney's new Celebration City in Kissimmee, FL, including installing streets, parks, the Town Center and much of the lakeside entertainment area.

► And now Valley Crest is working hand-in-hand with Disney to transform 800 acres of raw land on the Disney World property into Animal Kingdom, the resort's fourth major theme park. Valley Crest, in addition to installing a bewildering variety and number of plants, is doing the themed concrete and other hardscaping.

Parker says he has more than 100 pieces of equipment and about 160 people at the Disney site. They work out of a fourplex office. When they're done with their part of the "Africa" section of Animal Kingdom, they begin the "Asia" section. Disney's Animal Kingdom will have four separate themed areas when it's completed.

"We have an agreement with them (Disney) to maintain everything that we

**Valley Crest installed this landscape at the Coronado Springs Hotel at the Walt Disney Resort near Orlando, Fla.**

plant until the end of our project, then they will maintain it. They have great expertise," says Parker.

Parker thinks Valley Crest's diversification gives clients the advantage of working with a single contractor. This makes the contractor more accessible, and more accountable. From the contractor's standpoint, it provides several advantages, including more control of a project.

"What often hurts a landscape contractor the most is scheduling. Maybe the irrigation contractor doesn't do his job just right, and the landscaper ends up hitting a pipe," says Parker. "Or the electrical contractor comes in after the landscaper is done and tears up some of his work. The lonely landscaper can be doing his work again and again, and not be getting paid for it.

"We've diversified to handle more and more of that exterior work so that we can control, as much as we can, our own des-



tiny until the project is complete," he says.

While Parker isn't expecting the Orlando landscape construction market to remain as hot as it is now, he's confident that Valley Crest has established itself and will continue to expand in the Florida marketplace.

## Speedway a test of time, material

Valley Crest landscape and site construction company had a race with the clock this year as it worked to complete the landscaping for the California Speedway in less than 150 days.

The Speedway is located in Fontana, Calif., on near-desert land that was previously the site of the Kaiser Steel mill yard. Valley Crest worked hard to bring in turf, trees and ornamental plants to give sparkle to the Speedway oasis.

The Valley Crest people were used to the short timetable. It had to resod the Atlanta Olympic Stadium in 36 hours after the opening ceremonies tore up the turf.

Valley Crest used 150 landscape personnel, divided into round the clock crews. Leading the way were Operations Manager Dick Bruttig and Regional Vice President Chuck de Garmo. Bruttig is now

branch manager of Valley Crest's Los Angeles office.

Sixty-five pieces of heavy equipment and more than 30 vehicles were used on the job.

### Material acquisition challenge

The infield was sodded with enough dwarf tall fescue to cover more than 190 football fields. A total of 7.8 million sq. ft. of turf was used for the site.

Entrances and roadways throughout the facility were lined with 345, 30-foot Palm Trees and miles of Waxy Privet Ligustrum hedges. The flower beds were planted with *photinias* and blooming yellow and red day lilies, and more than 29,000 shrubs. Valley Crest installed more than 1000 trees and 430,000 sq. ft. of ground covers.

The project demanded an extraordinary irrigation system, and again, Valley Crest was up to the task, as it pulled 280 miles of irrigation wire. Seventy-five miles of irrigation pipe was installed.

The irrigation is a 600-hp system, which can produce 2000 gallons of water each minute. The system uses an initial 300 hp pump to push water up from a 900-ft. deep well located 1.5 miles away.

The water travels through a 16-inch casing to a 600,000 gallon underground reservoir located at the base of an old Kaiser Steel tower at the center of the raceway. From there, four 75-hp variable-speed pumps energize the system, to distribute the water through 14,000 sprinkler heads.

At the center of it all is the race track, a 2-mile, 14-degree oval. Aggregate for the track surface was brought in from Michigan. More than 300,000 tons of asphalt were poured at the track.

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## GIE show serves 5000

More than 5000 lawn care industry and landscape management professionals attended the 1997 Green Industry Expo held in Charlotte, NC, Nov. 15-18.

GIE reports the trade show was sold out and says the outdoor equipment demonstration was the largest yet.

The Green Industry Expo is a joint trade show effort engineered by the Professional Lawn Care Association of America (PLCAA); the Associated Landscape Contractors of America (ALCA); and the Professional Grounds Management Society (PGMS).

Other numbers: 70,700 net sq. ft. of available exhibit space was used, which is the largest exhibit floor ever for the GIE, and exceeds the previous record by 10 percent. A total of 287 companies exhibited, the second highest number of exhibitors.

"We had an excellent turnout at the conferences, trade show and Demo," reports Trade Show Manager Eleanor Ellison. "From start to finish we had a great program for exhibitors and attendees.

Next year's GIE is scheduled to be held in Nashville, TN, Nov. 14-17. Interested exhibitors should contract early for show space, suggests GIE. Contact Ellison at (770) 973-2019. For information on the conference, contact the sponsoring associations at the following numbers: PGMS at (800) 60-7467; ALCA at (800) 395-2522; PLCAA at (800) 458-3466.

## PGMS elects officers, directors

In conjunction with its 86th Anniversary Annual Conference, held at the GIE show in Charlotte, NC, Nov. 15-18, the Professional Grounds Management Society elected its new officers, a regional director and at-large directors for three-year terms.

The new PGMS officers are:

President: Tom Riccardi, Goodyear Tire & Rubber Co., Akron, Ohio.

1st Vice president: Randall Willis, CGM, NW Missouri State University, Maryville, Mo.

2nd Vice president: Kevin O'Donnell, Villanova University, Villanova, Pa.

Treasurer: George Van Haasteren, CGM, Columbia University, New York, NY.

Past President: Steve Wharton, CGM, Minot Park District, Minot, ND.

SW Regional Director: Thomas Dew, Texas A&M University, Bryan-College Station, Texas.

Director-at-large: Christopher Fay, University of North Carolina, Greensboro, NC.

Others serving on the PGMS board of directors:

George Gaumer, The Davey Tree Expert Co., Kent, Ohio; George Meeks, CGM, Service Master, Inc., Houston, TX; Edwin Fenwick, Ned's Landscaping, Boulder, Colo.; Matthew Vehr, Spring Grove Cemetery & Arboretum, Cincinnati, OH.

## TCNC wins PLCAA award

The Turfgrass Council of North Carolina, Southern Pines, NC, was named the Allied Regional Association of the year by the Professional Lawn Care Association of America.

PLCAA board member and TCNC President-elect, Sam Lang, accepted the award on behalf of TCNC at PLCAA's Annual Conference and Green Industry Expo in Charlotte, NC.

## Vander Kooi rattles cages at seminar

Green Industry speaker/consultant Charles Vander Kooi was in top form during his two day seminar at the Green Industry Expo in Charlotte this past November.

Never one to pull a punch when he spots major business errors committed by his peers, Vander Kooi outlined numerous ways employers mistreat their employees and run their companies into the ground.

Is money a motivator? No! insists Vander Kooi.

"Money as a motivator is at the bottom of the barrel, in the list of things that build loyalty and esprit de corps," says Vander Kooi, of Littleton, CO.

"The number one human need among the people who work around you and for you, is to know that they are specially gifted people. And when they use those gifts and talents, someone notices it, and recognizes it for a job well done.

"Too many of us hand out money without the power of the recognition that goes with it," states the consultant, who lectures around the world on this and related business management topics.

Vander Kooi suggests: each week, write a note of appreciation to someone who plays a part in the employee's daily life, such as his or her spouse, child, client or supplier. Tell that person what an asset the employee is to the company, and how great it is to have his or her gifts and talents at work in your company.



**Vander Kooi: money ain't the motivator.**



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- 02  255 Landscape Contractors (installation and maintenance)
- 03  260 Lawn Care Service Companies
- 04  265 Custom Chemical Applicators (ground and air)

- 05  270 Tree Service Companies/Arborists
- 06  275 Landscape Architects
- 07  280 Land Reclamation and Erosion Control
- 08  285 Irrigation Contractors
- Other (please specify) \_\_\_\_\_

- 09  290 Sports Complexes
- 10  295 Parks
- 11  300 Right-of-Way Maintenance for Highways, Railroads or Utilities
- 12  305 Schools, Colleges, Universities
- 13  310 Industrial or Office Parks/Plants
- 14  315 Shopping Centers, Plazas or Malls
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- 17  330 Cemeteries/Memorial Gardens
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- 19  340 Military Installations or Prisons
- 20  345 Airports
- 21  350 Multiple Government Municipal Facilities
- Other (please specify) \_\_\_\_\_

- 22  355 Extension Agents/Consultants for Horticulture
- 23  360 Sod Growers/Turf Seed Growers/Nurseries
- 24  365 Dealers/Distributors/Formulators/Brokers
- 25  370 Manufacturers
- Other (please specify) \_\_\_\_\_

2. Which of the following best describes your title? (fill in ONE only)

- 26  10 Executive/Administrator- President, Owner, Partner, Director, General Manager, Chairman of the Board, Purchasing Agent, Director of Physical Plant
- 27  20 Manager/Superintendent- Arborist, Architect, Landscape/Grounds Manager, Superintendent, Foreman, Supervisor
- 28  30 Government Official- Government Commissioner, Agent, Other Government Official
- 29  40 Specialist- Forester, Consultant, Agronomist, Pilot, Instructor, Researcher, Horticulturist, Certified Specialist
- 30  50 Other Titled and Non-Titled Personnel (please specify) \_\_\_\_\_

3. Is your golf course:

- 31  A Public 32  B Semi Private 33  C Private 34  D Hotel/Resort 35  E Municipal

4. If you work for a golf course, how many holes are on your grounds?

- 36  1 9 37  2 18 38  3 27 39  4 36+

5. How many acres are maintained at your facility? \_\_\_\_\_

6. SERVICES PERFORMED (fill in ALL that apply)

- 40  A Mowing 45  F Turf Fertilization 50  K Paving, Deck & Patio Installation
- 41  B Turf Insect Control 46  G Turf Disease Control 51  L Pond/Lake Care
- 42  C Tree Care 47  H Ornamental Care 52  M Landscape Installation
- 43  D Turf Aeration 48  I Landscape/Golf Design 53  N Snow Removal
- 44  E Irrigation Services 49  J Turf Weed Control 54  O Other (please specify) \_\_\_\_\_

7a. Do you specify, purchase or influence the selection of landscape products?

- Yes  No

7b. If yes, check which products you buy or specify: (fill in ALL that apply)

- 55  1 Aerators 62  8 Herbicides 69  15 Sweepers
- 56  2 Blowers 63  9 Insecticides 70  16 Tractors
- 57  3 Chain Saws 64  10 Line Trimmers 71  17 Truck Trailers/Attachments
- 58  4 Chipper-Shredders 65  11 Mowers (reef/rotary) 72  18 Trucks
- 59  5 De-icers 66  12 Snow Removal Equipment 73  19 Turfseed
- 60  6 Fertilizers 67  13 Sprayers 74  20 Utility Vehicles
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- 7a. Do you specify, purchase or influence the selection of landscape products?  
 Yes  No
- 7b. If yes, check which products you buy or specify: (fill in ALL that apply)
- 55  1 Aerators 62  8 Herbicides 69  15 Sweepers
  - 56  2 Blowers 63  9 Insecticides 70  16 Tractors
  - 57  3 Chain Saws 64  10 Line Trimmers 71  17 Truck Trailers/Attachments
  - 58  4 Chipper-Shredders 65  11 Mowers (reel/rotary) 72  18 Trucks
  - 59  5 De-icers 66  12 Snow Removal Equipment 73  19 Turfseed
  - 60  6 Fertilizers 67  13 Sprayers 74  20 Utility Vehicles
  - 61  7 Fungicides 68  14 Spreaders
8. Do you have a modem?  Yes  No

101	113	125	137	149	161	173	185	197	209	221	233	245	257	269	281	293	305
102	114	126	138	150	162	174	186	198	210	222	234	246	258	270	282	294	306
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109	121	133	145	157	169	181	193	205	217	229	241	253	265	277	289	301	313
110	122	134	146	158	170	182	194	206	218	230	242	254	266	278	290	302	314
111	123	135	147	159	171	183	195	207	219	231	243	255	267	279	291	303	315
112	124	136	148	160	172	184	196	208	220	232	244	256	268	280	292	304	316

# Events

## JANUARY

**12-13: Arkansas Turfgrass Association Conference and Show**, Statehouse Convention Center, Little Rock, Ark.; Angie McSwain, 501/664-8048.

**12-13: Maryland Turfgrass Conference & Trade Show**, Baltimore Convention Center, Baltimore, Md.; Dave Cammarota, 800/899-7645; 410/335-0164.

**12-14: Nebraska Turfgrass Conference**, Holiday Inn Central, Omaha, Neb.; 402/463-5418; 402/463-5683.

**12-16: University of Maryland Advanced Land-**

**scape IPM Short Course**, College Park, Md; Jennifer Lyons-Carter, 301/405-3913.

**13-14: Wisconsin Turfgrass & Greenscape Expo '98**, Holiday Inn West, Madison, Wisc.; Audra Anderson, 608/845-6536; 608/845-8162.

**13-15: Indiana Arborist Association Annual Meeting**, Marriott Inn, Indianapolis, Ind.; Harvey Holt, 765/494-3585.

**14: Professional Turf & Landscape Conference**, Westchester County Center, White Plains, NY;

Carol Mueller, 914/636-2875 (phone & fax).

**14: Sacramento Valley Landscape & Nursery Expo**, Sacramento Convention Center, Sacramento, CA; Margo Chevront, 916/442-4470; 916/442-4564.

**14: South Carolina Contractors' Turf Conference**, Sheraton Columbia NW, Columbia, S.C.; 803/790-2798.

**14-16: Utah Green Industry Conference and Show**, David McKay Center, Orem, Utah; Larry Rupp, 435/797-2255; 435/797-3376.

**14-17: ALCA Interior Plantscape Conference and Tropical Plant Industry Exposition**,

Embassy Suites Hotel and Fort Lauderdale Convention Center, Fort Lauderdale, Fla.; Elise Lindsey, 703/736-9666; 703/736-9668.

**14-18: Sports Turf Managers Association Conference & Expo**, Disney's Coronado Springs Resort and Wide World of Sports Complex, Orlando, FL; Steve Trusty, STMA, 712/366-2669; 712/366-9119.

**15-17: The Florida Nurserymen and Growers Association's Tropical Plant Industry Exhibition**, Greater Ft. Lauderdale/Broward County Convention Center, Ft. Lauderdale, Fla.; Sabrina Wade, 800/375-3642; 407/295-1619.  
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**Bio Turf Gro**, makers of 'high-tech' fertilizers for golf courses, is a winner of \$10,000 in the first US WEST New Ventures \$100,000 Seed Money Competition. The competition was established last July to help promising new and growing small businesses in US WEST's 14-state territory. Bio Turf Gro is a two-year-old Idaho firm that develops and markets more than 30 ecologically sound organic liquid and dry granulated plant nutrients for golf courses, and landscaping and turf-related businesses. The company is operated by Mark and Gary Grigg. Gary is a well-known golf course superintendent.

**The Scotts Company** has reported record net income of \$39.5 million for fiscal 1997, on sales of \$900.8 million. This is a

good rebound from 1996 results, in which the company had a net loss of \$2.5 million on sales of \$751.9 million. All five company business units reported increases in net sales.

**Plant Health Care, Inc.**, holds Tree and Landscape Care Workshops, March 10 and 12, 1998. The March 10 session is held at the Ramada Plaza Hotel Carowinds, Fort Mill, SC. The March 12 event will be held at North Metro Tech, Acworth, Ga., near Atlanta. Events feature Dr. Don Marx of Plant Health Care, Inc.; Dr. Kim Coder, University of Georgia; Dr. Tom Smiley, Bartlett Tree Research Laboratories; Dr. Don Ham, Clemson University. Contact is Jeanne Campbell, (864) 656-2479.

**Woods Equipment Com-**

**pany** has acquired **Wain-Roy, Inc.**, a Hubbardston, Mass.-based manufacturer of quick coupler systems for tractors, loaders, backhoes and hydraulic excavators. Woods makes and markets attachments systems in the agricultural, landscape and construction markets. Steve Starret, former president of Wain-Roy, is Woods' new general manager of construction. Woods now has a new line of construction equipment attachment systems, including Quick Change Rigid Tool Hitch Coupler Systems; Quick Change Grapples; Quick Change Ripper Buckets; and the Quick Change JAW.

**IMC Vigoro** and **Tri-State Plant Food** have a new distributor agreement. Tri-State, of Dothan, Ala., will represent

IMC Vigoro's turf fertilizer products throughout the gulf states (Ala., Miss., Fla. panhandle and southwest La.) Dennis Rich, vice president of Tri-State leads the sales team.

**Toro's** purchase of **Exmark Manufacturing Company** is a done deal. Toro says the buy gives it the "broadest and most complete line of integrated products and services for the landscaping industry." Kendrick B. Melrose, Toro chairman and CEO, comments that Exmark's customer focus, innovation and product reliability is a big plus, and that Toro will operate Exmark as an independent brand and distribution system, to capitalize on its good customer relations.

Bill Dunn has joined **Lofts Seed** as vice president of East Coast Operations. Dunn directs the day-to-day branch operations with manager and turf-grass field sales representatives.

**Zeneca** will buy **ISK's** worldwide chlorothalonil business and international distribution rights to four new products (fluazinam fungicide, with specific utility in horticultural crops; fosthiazate nematicide, with applications in many crops; and flazasulfuron (for sugar cane and vines) and nicosulfuron herbicides (a corn selective chemical).

Chlorothalonil is marketed under the trademarks "Bravo" and "Daconil 2787" and is used in a wide range of crops and turfgrasses. Purchase price is reported at \$500 million. **LM**

## Info center

VIDEOS AND LITERATURE FOR THE GREEN INDUSTRY

**HOT OFF THE PRESSES...** the 1997-98 edition of the Oregon Association of Nurserymen's *Directory & Buyers Guide*. It contains 600 pages of plant and product listings and industry information. New this year, the catalogue is available on the Internet's World Wide Web at: <http://www.nurseryguide.com>.

**WALLS, STEPS OF STONE...** Stonework Techniques and Projects, by Charles McRaven, a blacksmith and stonemason, gives a complete, step-by-step course in basic stone construction. The book includes illustrated instructions for 24 projects such as walls, steps, paths, bridges, hearths and more. Cost for this paperback book is \$18.95 US/\$26.95 Canada. Contact Storey Publishing, P.O. Box 445, Pownal, Vt. 05261; 800/441-5700, Dept. YP; [www.storey-books.com](http://www.storey-books.com)

**TRAINING FOR LANDSCAPERS...** The "Super Crew" video series from The University of Georgia cooperative extension service covers quality landscape management, planting of woody ornamentals, annual bed preparation and installation and pesticide use and safety. At \$39.95 each, there is also a buy-five-get-one-free purchase option. Training help for personnel on many grounds, campuses, golf courses, resort grounds and private estates. The series is endorsed by PGMS; Georgia Green Industry Assoc.; Georgia Turfgrass Assoc. and Metro Atlanta Landscape and Turf Assoc. Contact Judy Sharpton at 404/371-2821.

## Excel 2500 turns within its own length

The 2500 Compact mower is built with high-capacity, deep-tunnel mowing decks. Hydraulic deck lift is standard. A 22-hp Kohler Command engine provides the power.



Excel says the 2500 Compact has "the world's fastest edger attachment." The mower turns within its own length on counter-rotating, independent-drive wheels.

A BAC-VAC catcher installs quickly and is easy to remove and empty. The Excel Hustler 3000 features an air-cooled Kohler Command engine.

Circle No. 260

## No drift with this boom

Broyhill's DriftBuster is a complete 20-foot self-supporting drift boom for controlled spraying applications. It moves independently while following the ground contour. It features perimeter cover brushes assuring a consistent spray pattern even in windy conditions.

A standard electric lift for raising/lowering outer wings, along with break-a-way hinges, make this unit maneuverable in tight areas. DriftBuster is self-supporting so it adds no weight to the tow vehicle. However, controls are vehicle mounted for finger-tip operation. Adaptable to all Broyhill tow or vehicle-mounted sprayers, it is a popular addition to the Hydramaster (pictured).

For more information, contact Broyhill at 402/987-3412; E-Mail Broyhilsal@aol.com, or

Circle No. 261



## Array improves herbicide uptake

Rosen's Inc. offers Array, a dry adjuvant. Array's formulation dissolves instantly, mixes easily, handles well and does not have any special storage requirements.

"Array targets herbicide performance by increasing spray retention on the leaf and by delivering a uniform spray pattern," says Kent Woodall, Rosen's market manager. "Array also provides a high level of ammonium ions. This improves herbicide uptake. Herbicide antagonism, caused by hard water is also reduced when Array is added to the spray mix."

Trials conducted at the Laboratory for Pesticide Control Application Technology, The Ohio State University, have demonstrated that when Array is added to the spray mix, spray droplets stick to the leaf surface better than conventional adjuvants. Packaging is available in 9 and 45 pound bags.

For more information about Array, call Kent Woodall at 816/781-9191 and tell them that Landscape Management informed you, or

Circle No. 262

## Keep traps and bunker sand in place

Poly-Pavement is an environmentally friendly liquid soil solidifier that may be diluted and spray-applied to flat, sloped and vertical soil surfaces to bind the surface soil particles to one another. The

strength of the soil particle bond is sufficient to lock soil particles in place and prevent soil movement and migration due to high water flow. Trap and bunker soil erosion and sand contamination is prevented by spray applying diluted Poly-Pavement onto the bunker soil to create a tough polymer-soil lining.

The application method consists of three basic steps:

1) Remove as much of the bunker sand as possible without disturbing the bunker soil

2) Gently spray-apply diluted Poly-Pavement onto the bunker soil surface, liberally.

3) Allow the treated soil surface to dry and replace the bunker sand.

Before the Poly-Pavement dries on highly-sloped and vertical surfaces, bunker sand may be pressed or rolled into the surface and lightly sprayed with diluted Poly-Pavement Soil Solidifier to imbed sand into the soil surface and create a surface that keeps the appearance of sand throughout the rain season.

To learn more about this product, call (213) 954-2240 and say you saw it in LM, or

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Circle 112

## Kubota offers lots of choices

Kubota's B-Series compact tractors range from 13 to 18 PTO hp, and are well suited to a variety of landscaping and turf applications. The B-Series models feature 3-



cylinder diesel engines. Hydrostatic transmission is available.

Kubota also offers its Grand L Series of tractors from 25 to 27 hp equipped with hydrostatic steering, shuttle transmission and shift-on-the-go. Loaders, backhoes, box scrapers and tillers are among the implements that enhance the Grand L's versatility.

Circle No. 264



## Walker can tackle lots of jobs

Walker mowers have made a name for themselves as rugged, dependable machines with turf professionals. And they can be used for a large number of turf-related tasks.

The hitch assembly replaces the mower deck and clips onto the tractor in a snap and allows the use of implements like the 42-inch snow blower, 46-inch dozer blade, and the 47-inch rotary broom.

Contact Walker, based in Fort Collins, CO, at 313/221-5614, or

Circle No. 265

## Rodeo now in one-quart size

Monsanto Company offers Rodeo aquatic herbicide in a new one-quart package in 1998, in addition to the 2.5 and 30-gallon containers already offered.

Ideal for small lakefronts, ponds, canals and creeks, the new one-quart Rodeo delivers one-time, roots-and-all control of over 190 tough aquatic weeds such as cattail, Johnsongrass, phragmites, torpedo grass, water lillies and water hyacinth. Because Rodeo moves throughout both plant foliage and roots, the plant will not regrow to require additional weed control efforts.

For additional information about the new one-quart Rodeo package, a member of the Roundup family of products, contact 800/322-3111, or

Circle No. 266



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C.A.A. (California Arborist Association)  
C.A.P.C.A. (California Agricultural Prod. Consultants Assoc.)  
C.L.C.A. (California Landscape Contractors Association)  
C.P.R.S. (California Park and Recreation Society)  
I.A. (Irrigation Association)  
I.E.C.A. (International Erosion Control Association)  
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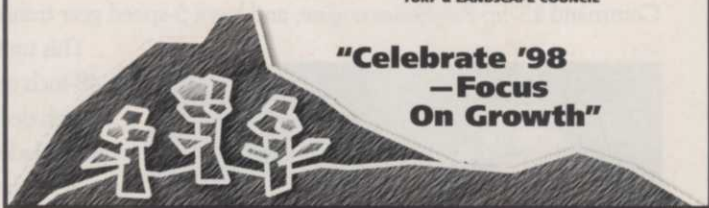
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### Deere walk-behind loaded with features

The John Deere GS-30 commercial walk-behind mower is powered by a Kohler Command 13-hp Pro-Series engine, and has a 5-speed gear transmission.



This unit can be equipped with a 48-inch or a 36-inch deck. The 36-inch deck features two-spindle, timed blades for a superior cut, a larger discharge opening and a new discharge chute for better grass clipping distribution, 3/4-inch to 4 1/2-inch cutting height range, and a fixed, deep-deck design.

It also features electric PTO and padded operator presence levers. It can take on lots of tasks with John Deere attachments like the 3.5 bushel, side-mounted Grass Catcher; two-wheel fixed sulky; two-wheel steerable sulky; or a 36-inch Tricycler Mulching attachment.

Circle No. 268

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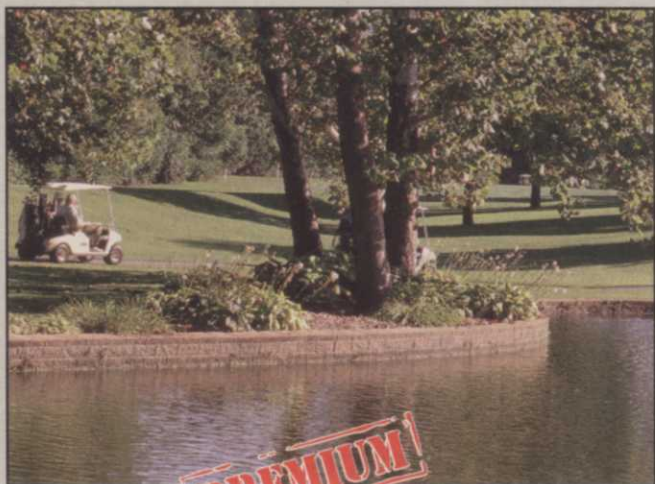
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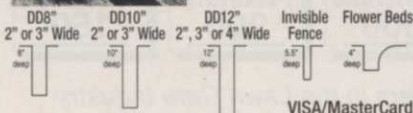
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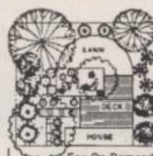
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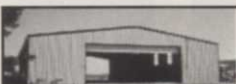
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